

NORTHWEST DEFENSE AGAINST MUSSELS (NDAM)

DECLARATION OF COOPERATION

JUNE 2013

BACKGROUND

Zebra and quagga mussels are invasive, freshwater mussels that reproduce quickly and create large populations. Zebra mussel densities have been reported to be over 700,000 individuals per square meter in some facilities in the Great Lakes. Adult zebra and quagga mussels are biofoulers that occlude pipes and screens in municipal and industrial raw-water systems, requiring millions of dollars annually to treat. They are filter feeders that remove planktonic algae, zooplankton, protozoa, and bacteria from the water column and prevent their consumption by fish. Thus, zebra and quagga mussels may completely alter the freshwater food web and negatively impact fish populations.

Quagga and zebra mussels arrived in the Great Lakes from Europe in the 1980s in the ballast water of ships. They produce microscopic larvae that float freely in the water column, which has allowed them to spread rapidly through the Great Lakes and the Mississippi drainage on water currents. The adults can survive several days out of water, and larvae can survive anywhere from five up to 27 days in standing water of trailered watercraft (Choi et al. 2013). These invasive mussels can readily attach to watercraft being used in infested waters, and can be transported to uninfested waterbodies. Their veligers can also be transported by watercraft. In 2007, quagga mussels were found in Lake Mead, likely transported there by recreational watercraft, and have since spread to other states in the Southwest. Larvae of quagga mussels have been reported in Rye Patch Reservoir, Nevada, just 120 miles from the Oregon border.

Eradication of a mussel infestation is only possible under very limited circumstances and is likely impossible in most rivers, reservoirs and lakes. Preventing their introduction to the Pacific Northwest is the most cost-effective management strategy. The most important vector for the spread of zebra and quagga mussels between water bodies is trailered watercraft traffic. Therefore, vigorous efforts to find and prevent the launch of contaminated watercraft are the most effective preventive action that can be taken. Fortunately, it is also a highly feasible approach.

The Pacific Northwest is the only region of the United States and Canada that has not been invaded by quagga and zebra mussels, and there is strong interest by numerous individuals, groups, agencies, and industries to prevent the introduction of these invasive species. On May 15, 2013, 90 individuals representing Canadian and Pacific Northwest irrigation and water districts, water suppliers, legislators, state and federal agencies, tribal sovereign nations, nonprofit organizations, recreational watercraft interests, consortiums, and others met in Vancouver, Washington to discuss, “Preventing an Invasion: Building a Regional Defense against Quagga and Zebra Mussels” and to develop a set of action items to address challenges and barriers to preventing the introduction of invasive mussels to the Pacific Northwest. The following is a description of the vision, goals, and actions generated by summit participants.

II. GOAL AND VISION: NORTHWEST DEFENSE AGAINST MUSSELS

Goal—Prevent the introduction and establishment of invasive zebra and quagga mussels in the Pacific Northwest (Washington, Oregon, Idaho, Montana, British Columbia, Alberta, Saskatchewan, Manitoba).

Vision—Quality of life in the Pacific Northwest is integrally linked to its thriving natural resource-based economy. Pacific Northwest states and provinces share a common interest in protecting our resources from the

adverse impacts of invasive mussels. Resources that we must protect include: healthy ecosystems; a productive economy; sound strategic investments in hydropower, irrigation, and water infrastructures; and significant strategic investments made in salmon and other threatened and endangered species. To achieve that vision requires that the Pacific Northwest states and provinces communicate, collaborate, and coordinate to implement the Northwest Defense Against Mussels (NDAM):

- (1) **Regulatory and policy** actions that address existing gaps in federal and state legislation;
- (2) **Outreach** actions to enhance awareness, understanding, and appreciation of the economic and natural resource significance of the threat of invasive mussels to the Pacific Northwest and to enhance political will and effect positive changes in public behavior;
- (3) **Funding** strategies to ensure equitable, long-term sustainable funding for aquatic invasive species prevention;
- (4) **Research** actions focused on the highest priority science needs relative to *Dreissena* species; and
- (5) **Coordination** to prioritize actions, compile a regional cost document, establish reciprocity for watercraft inspections across geopolitical boundaries, make data and information more widely available, and ensure effective and complete monitoring.

III. NDAM FOCUS AREAS AND POLICY PRIORITIES

NDAM must focus its efforts and investments on priorities that respond to level of threat that invasive mussels pose to individual states and the region to achieve the vision and goal described above.

NDAM FOCUS AREA PRIORITIES 2013–2014				
ACTION	LEAD	CONTRIBUTORS	TIME-LINE	BUDGET
A. REGULATORY/POLICY ACTIONS				
A1. Conduct a series of workshops to: <ol style="list-style-type: none"> i. Advance regulatory review for chemical/pesticide control. ii. Advance regulatory review for non-chemical/pesticide control. iii. Explore the NEPA/SEPA framework re: process evaluation for emergency treatment and control. iv. Assess 24C local use designation under FIFRA for control options not already registered in states and provinces. v. Update the appendix of the CRB plan re: control/eradication methods, including non-chemical/pesticide control options. 	CRB Team, State FW agencies, affected agencies, agencies with reviewing/permitting authority	All affected agencies, including NOAA, DFO, USFWS	Dec. 2013	
A2. Support federal and state legislation/regulations authorizing the closure of infested waterbodies.	CRB Team, AIS Coordinators	States, provinces, tribal sovereign nations, municipalities, watercraft groups/ stakeholders	2013–2015	

NDAM FOCUS AREA PRIORITIES 2013–2014

A3. Support Northwest state/provincial/tribal efforts to develop zebra/quagga mussel rapid response emergency plans for their jurisdictions.	PSMFC, NWPCC, PNWER	States, provinces, tribal sovereign nations, municipalities, watercraft groups/ stakeholders	2013–2014	In kind
A4. Support federal listing of the genus <i>Dreissena</i> as injurious in the United States and Canada.	PSMFC to distribute contact information for endorsements; PNWER leaders to meet with key PNWER Federal Canadian cabinet members	Summit participants and colleagues	July 2013	
A5. Make connections with industry and private entities to contact DOI Secretary Jewell and Senator Wyden and other congressional delegates to support a legislative listing of quagga mussels as injurious under Lacey Act.	Lisa DeBruyckere, other industry leads	Water users from all affected industries	Sept. 2013	
A6. Support full appropriation of state funded AIS plans (per section 1204 of the National Invasive Species Act)	PSMFC	Summit participants	Dec. 2013	
A7. Support reauthorization of the National Invasive Species Act.	PSMFC	Summit participants	Dec. 2013	
A8. Support reintroduction of H.R.2732, the Stop Westward Aquatic Threats Act, introduced by Washington’s Brian Baird in 2001. The bill would amend the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990 to prevent the westward spread of aquatic nuisance species by directing the Secretary of the Interior to prevent westward spread of such species across and beyond the 100th meridian, monitor water bodies, and provide rapid response capacity in certain Western States, and for other purposes.	PSMFC	Summit participants	Dec. 2013	
B. OUTREACH ACTIONS				
B1. Develop consistent messaging for targeted stakeholders and others that would be affected by the introduction and establishment of invasive mussels to raise awareness about the importance of addressing this issue, then host a series of webinars and use social media to outreach to groups.	PSMFC, Invasive Species Councils	Clean Boating Foundation, National Marine Manufacturers Association (David Dickerson), various Water Congresses	Sept. 2013	
B2. Build legislative interest and political will in zebra and quagga mussel prevention efforts in the Pacific Northwest. i. Ensure there is an AIS supporter/educator in every state legislative caucus to enhance awareness	Matt Morrison	PNWER Invasive Species Working Group, Legislative speakers group	July 2013	

NDAM FOCUS AREA PRIORITIES 2013–2014

and understanding of the threat of invasive mussels and the need to take action. ii. Encourage legislative hearings on invasive mussels in each state and province by reaching out to key supportive legislators.	Invasive Species Councils			
B3. Create a regional passport system task force to implement a regional passport and reciprocity with watercraft inspection stations across state and provincial borders for the 2014 boating season. Provide clear guidelines on use of such a system (e.g., no “fast pass”).	PSMFC to host conference call with states and provinces (first step)		July 2013	
B4. Engage the Vulnerability Assessment Team with virtual meetings, webinars, site visits, etc.	PSMFC		Ongoing	
B5. Enhance and improve timely communication about movements and inspections of high-risk watercraft in the West via the creation and use of a database that captures information about water conveyances moored in infested waters.	PSMFC	CRB Team	August 2013	\$20,000
C. FUNDING ACTIONS				
C1. Explore opportunities to identify and generate funding for regional AIS prevention efforts (currently spending ~\$2 million annually on prevention efforts in four states; need ~\$5-6 million annually to increase inspection coverage, dates, and times) and ensure multiple contributors are involved. i. Develop a list of organizations at risk by subgroup ii. Develop shared vision and messaging iii. Host legislative hearings in states. iv. Focus attention, efforts, and strategic investments on water conveyance inspection stations on the southern and eastern borders of the Pacific Northwest, where vectors and pathways of introduction are likely to occur. Engage in discussions with Pacific Northwest states and provinces re: pooling financial resources to support border protection. v. Refine identification of high priority sites for watercraft cleaning stations and monitoring through risk assessments.	PSMFC to host conference call with state AIS coordinators and Invasive Species Councils PSMFC, CRB Team Vulnerability Team	Industry leaders, all stakeholder groups State AIS Coordinators AIS Coordinators, WSU/USGS (Western Fisheries Research Center)	July 2013 Dec. 2013 Dec. 2013	
C2. Provide funding to PSMFC to assume more responsibility for coordination efforts.	PSMFC	Federal agencies	Sept. 2013	\$200,000

NDAM FOCUS AREA PRIORITIES 2013–2014

D. RESEARCH ACTIONS

D1. Identify a Vulnerability Assessment Team to coordinate/prioritize needed assessment and mitigation response efforts at hydro/raw water projects and facilitate sharing of information among affected areas and uninfested areas.	PSMFC	Summit attendees	Sept. 2013	Travel Support \$15,000
D2. Conduct research to determine the number of trailered watercraft traveling on roadways (and/or being launched) and determine the percentage being intercepted.	State teams, CRB	Graduate student, WSU/USGS (Western Fisheries Research Center), WSDOT	July 2014	\$50,000

IV. STATEMENTS OF COMMITMENT

This Declaration of Cooperation, although not a legally binding contract, is a statement of the good faith and commitment of the undersigned parties, who agree to implement the aforementioned actions (in Table 1 of this document) to prevent the introduction and establishment of invasive mussels in the Pacific Northwest. Achieving this vision will require the commitments of all parties identified below. The commitments represented below form a public statement of intent to support and participate in this endeavor, to strive to identify opportunities and solutions whenever possible, to seek efficiencies through cooperation and collaboration, and to contribute assistance and support within resource limits. All supporters below acknowledge that the greatest chance of success in achieving the vision depends on the cooperation of all partners. The undersigned parties to the Declaration of Cooperation have, through a collaborative process, agreed and pledged their cooperation to implement the actions in Table 1.

V. SIGNATURES

Ronald McMullen

Alberta Irrigation Projects Association

Centralia City Light

BC Hydro

Chelan County PUD

BC Ministry of Environment

City of Bellingham

BC Ministry of Forests, Lands and Nat. Res. Ops.

Clark Public Utilities

Bonneville Power Administration

Cocolalla Lake Association

Columbia River Inter-Tribal Fish Commission

National Marine Fisheries Service

Northwest Power and Conservation Council

Columbia Power Corporation

Douglas County PUD

Northwest Public Power Association

Eugene Water & Electric Board

Office of US Senator Patty Murray

OR Dept. of Environmental Quality

Gifford Pinchot National Forest

Oregon Dept. of Fish and Wildlife

Grant PUD

Oregon Invasive Species Council

LEONARD WILLETT
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DN: c=US, o=U.S. Government, ou=Department of the Interior,
ou=Bureau of Reclamation, cn=LEONARD WILLETT,
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Date: 2013.09.24 09:16:10 -0700

Hoover Dam

Oregon State Marine Board

Idaho Department of Environmental Quality

Eric Anderson, Member, Idaho House of Representatives

Pacific Northwest Economic Region

Idaho Power Company

Pacific Northwest Waterways Association

Montana Fish, Wildlife & Parks

Pacific States Marine Fisheries Commission

PacifiCorp

PNGC Power

Portland General Electric



Portland State University

Puget Sound Energy

River Road Generating Plant-GE



Skamania County

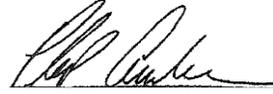


Seattle City Light

US Army Corps of Engineers



Washington Dept. of Ecology



Washington Dept. of Fish and Wildlife



Washington Dept. of Transportation



Washington Invasive Species Council



Washington Public Utility District Association

Washington State University Vancouver

Whatcom County Public Works